

Accordingly, enclosed is a Petition for Extension of Time and the appropriate extension fee to extend the period for response to today's date.

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the following remarks.

Claims 1-11 and 19-26 are presented for prosecution on their merits.

**I. THE FINALITY OF THE EXAMINER'S ACTION
IS PREMATURE AND SHOULD BE WITHDRAWN**

Applicant respectfully submits that the finality of the outstanding Office Action is premature and should be withdrawn because the Examiner's Section 102(b) rejection of claims 10 and 11 in the final Office Action was not expressly made in the Office Action dated May 31, 2002.

In the present case, the Examiner failed to cite any art to reject claims 10 and 11. The only indication by the Examiner that claims 10 and 11 were rejected was made on the Office Action Summary sheet of the Office Action dated May 31, 2002. The Applicant was not informed which section of the U.S. Code the Examiner was rejecting claims 10 and 11 and failed to cite any art in support of a rejection. Therefore, Applicant did not have his statutory right to respond to the Examiner's rejection in the Office Action of May 31, 2002.

The MPEP provides that a second action on the merits shall be final "except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p)." MPEP 706.07(a).

The final Office Action dated November 5, 2002, was the *first* instance in which Applicant was made aware of the basis of the Examiner's rejection of claims 10 and 11. And for the purposes of the MPEP is a new ground of rejection. This new ground of rejection was neither: (1) necessitated by Applicant's amendment to the claim; nor (2) based on information submitted in an Information Disclosure Statement. The new rejection arose because of the Examiner's mistake (i.e., a PTO mistake) and the Applicant should not be prejudiced by a mistake made by the PTO.

The Examiner has now made two mistakes. The first when she forgot to include a grounds of rejection in the Office Action of May 31, 2002, and the second when she made the Office Action dated November 5, 2002, final.

Applicant made the Examiner aware of her first mistake in Applicant's Reply to Office Action mailed September 3, 2002, but the Examiner has conveniently ignored Applicant's statement that the next Office Action (the one subsequently mailed on November 5, 2002) could not be made final.

In view of the above, the outstanding Office Action's finality is premature and should be withdrawn.

II. SUMMARY OF OFFICE ACTION

The Examiner has rejected claims 1-11 and 19-26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 460,054 to Rhind.

III. DISCLOSURE OF U.S. PATENT NO. 460,054 TO RHIND

U.S. Patent No. 460, 054 discloses a gas burner that includes three radial gas-supply arms 3 that have ducts in their center and connect to a ring 3a having a circular channel which communicate with the ducts of the arms, an annular chamber 4 formed from a cylindrical wall 6 and a cylindrical inner wall 7. The cylindrical walls 6, 7 have a top 5a provided with jet-apertures 5. (See Rhind lines 35-50.) The gas burner disclosed in the '054 patent also includes an inner shell 9, an outer perforated shell 10, a conically-shaped outer perforated thimble 12 that is fixed to a concentric ring 13, an inner perforated thimble 14, and an air distributor consisting of a perforated hanging shell 16 and a centrifugal disk deflector 17. An additional annular shell 18 defines annular chamber 15.

IV. REPLY TO FINAL OFFICE ACTION

The Examiner states that “the features upon which applicant relies (i.e., gas that is variably adjusted, horizontal versus vertical orientation, portability, etc.) are not recited in the rejected claim(s).” This statement by the Examiner is not even remotely accurate.

The differences claimed by Applicant were clearly explained in the Reply to Office Action mailed September 3, 2002. These structural differences will be enumerated below for the

Examiner to properly consider.

A) Rhind's combustion system requires at least eight major aperture elements, including a top 5a, an inner shell 9, an outer perforated shell 10, a conically-shaped outer perforated thimble 12, an inner perforated thimble 14, a perforated hanging shell 16, a centrifugal disk deflector 17, and an additional annular shell 18.

In contrast, Applicant utilizes two air-controlling conical frusta 82, 80. In independent claims 1 and 20, Applicant clearly and expressly recites two frusta conical sections. The difference between Rhind's eight (at least) air-controlling elements and Applicant's two elements would traverse any rejection based on Section 102. Therefore, Rhind cannot possibly describe and enable Applicant's burner, and therefore cannot anticipate Claims 1-11 and 19-26 of Applicant.

B) Of the aforementioned eight elements, Rhind discloses three spherically-shaped aperture elements, two flat aperture elements, one conical aperture element and two conical frustum-shaped aperture elements. Rhind's conical (i.e., inner perforated thimble 14) and two conical frustum-shaped elements (i.e., outer perforated thimble 12 and perforated upper shell 9) all converge in the same direction (i.e., they narrow as the distance from the bottom or gas source increases in the Rhind burner). Even if the inner perforated thimble 14 is considered to be a frustum, it converges as does outer perforated thimble 12 and perforated upper shell 9.

Applicant has used the standard definition of frustum, namely, a portion of a solid such as a cone or pyramid, between two parallel planes cutting the solid, especially the section between the base and a plane parallel to the base. (See, for example, *The American Heritage*

Dictionary, Second College Edition, Houghton Mifflin Company, Boston, © 1982, 1985.)

Rhind issued more than 110 years ago. Applicant has taken the time to dissect the Rhind gas burner and has included reference numerals for the Examiner to clearly understand Applicant's arguments. The Examiner has failed to give Applicant the same courtesy.

The Examiner states, "Rhind also discloses a second conical frustum with a diverging profile..." Since the Examiner failed to include a reference numeral from Rhind to indicate what she believes is a "diverging" second conical frustum, Applicant is unable to specifically respond to her comments. However, Applicant cannot identify any diverging frusta in the Rhind disclosure.

Rhind's inner perforated thimble 14, outer perforated thimble 12 and perforated upper shell 9 are the only structural elements in Rhind that may be considered frusta and they all converge. In contrast, Applicant's first conical frustum 82 converges inward as the distance from the burner tube increases, while the second conical frustum 80 diverges as the distance from the burner increases. Rhind does not disclose a single diverging conical frustum and, does not disclose or suggest a diverging conical frustum. Accordingly, Rhind not only fails to anticipate Applicant's claimed structure, it fails to suggest Applicant's claimed structure; therefore, Rhind cannot make obvious Applicant's Claims 1-11 and 19-26.

C) Rhind does not disclose Applicant's circularly-shaped burner tube having a plurality of gas exit holes on one side. Rhind states that the arms 3 and ring 3a supply gas to the annular chamber 4; however, neither the drawings nor the description of Rhind disclose how this is accomplished. Figure 3 shows the top view of the arms 3, but does not show any holes or any

type of outlet that allows gas into the chamber 4. Figure 2 appears to show some type of connection between an arm 3 and the annular chamber 4 but it is ambiguous in what it shows. Rhind only states that top 5a has a plurality of jet-apertures 5 for releasing the gas.

As is discussed at lines 40-46 in Rhind, the annular chamber 4 is formed from a cylindrical wall 6. Rhind requires that the arms 3 and ring 3a deliver gas first to a chamber 4 defined by cylindrical wall 6 and inner cylindrical wall 7, then out through jet-apertures 5.

Since the gas exits through the Rhind's apertures 5, Applicant believes that the apertures 5 of Rhind are somewhat analagous to the gas exit holes 74 of Applicant's combustion system. Applicant discloses a circularly-shaped burner tube that releases the gas for direct mixing with the air coming through the conical frusta for immediate burning. Applicant does not require cylindrical walls 6, 7, an annular chamber 4, radial arms 3, or any of a number of other structural features disclosed and taught by Rhind. In fact, these features taught by Rhind have no utility and would be incompatible in Applicant's combustion system. Applicant's claimed structure is not disclosed, taught, or suggested at by Rhind.

As expressed previously, the Examiner criticized the Applicant for failing to recite features in the claims that Applicant relies upon and that limitations in the specification are not read into the claims. However, Applicant is not required to recite in its claims features or elements that are not present. For example, Applicant does not need to state in claim 1, "A combustion system comprising: a circularly-shaped burner tube, a first conical frustum, a second conical frustum, *but NOT included are an inner perforated thimble 14, an outer perforated thimble 12, and a perforated upper shell 9, also NOT included is an annular chamber 4,*

cylindrical wall 6, etc.”

As the Examiner well knows, the prior art must be considered in its entirety. By ignoring the majority of the structure disclosed by Rhind and other important structural elements, the Examiner has disregarded the fact that Rhind's complexity teaches directly away from Applicant's simple, yet highly effective, design. Accordingly, Rhind can neither anticipate nor make obvious Applicant's claims 1-11 and 19-26.

D) The Examiner infers that Applicant's use of the term “proximate” makes the claims unusually broad. However, Applicant respectfully submits that the Examiner has overlooked other key language in Applicant's claims that limit the term “proximate” and define a precise location for the base of each conical frustum 82, 80.

Applicant's claim 1 presently reads, in part, as follows:

...a first conical frustum section having a pre-determined first pattern of orifice ports, the first conical frustum section having a basal end having a diameter proximate the diameter of the burner tube and a smaller diameter distal end, the basal end of the first conical frustum section being attached to the burner tube proximate said plurality of gas exit holes at a position radially inward from said gas exit holes...

It is important to note that the basal end of the first conical frustum has a diameter which is about the same diameter of the burner tube AND is attached to the burner tube next to, but radially INWARD from, the gas exit holes. Similarly, the basal end of the second conical frustum has a diameter which is about the same diameter of the burner tube AND is attached to the burner tube next to, but radially OUTWARD from, the gas exit holes. Based on the location expressly set forth in independent claims 1 and 20, the frusta straddle the gas exit holes.

Based on the Examiner's comments, she has clearly overlooked the features present in Applicant's claims or simply did not appreciate the structural differences apparent in Applicant's design. There are no structural features in Rhind that straddle the jet apertures 5, nor does Rhind suggest such structural features. Again, Rhind can neither anticipate nor make obvious Applicant's claims 1-11 and 19-26. (Although Applicant has not used the term "straddle" in the claims, one skilled in the art, after reading Applicant's specification would clearly know the position of Applicant's frusta.)

In view of the above, Applicant respectfully requests that the Examiner withdraw all rejections based on Rhind.

V. CONCLUSION

Rhind does not disclose or suggest Applicant's two conical frusta sections for controlling the air flow in a combustion system and, in particular, does not teach or even suggest a diverging conical frustum section. In addition, Rhind teaches directly away from Applicant's claimed

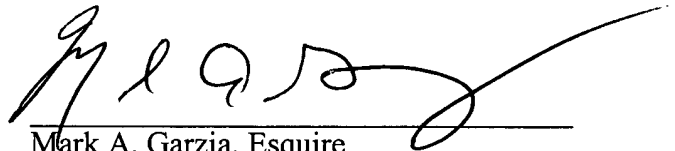
structure. Therefore, Rhind can neither anticipate or make obvious Applicant's claims 1-11 and 19-26.

Applicant respectfully requests withdraw of the final Office Action, entry of this Reply, reconsideration of this application in view of the above remarks (along with the amendments made in the Reply mailed September 3, 2002), and the prompt issuance of a Notice of Allowance.

Respectfully submitted,

Date: 5 MAY 2003

Enclosures



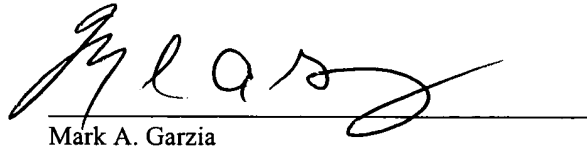
Mark A. Garzia, Esquire
Registration No. 35,517
Law Offices of Mark A. Garzia
P.O. Box 288
Media, PA 19063-0288
Telephone: (610) 566-5050

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CERTIFICATE OF MAILING

I hereby certify that this Reply After Final Office Action Pursuant to 37 CFR § 1.116, along with any paper or fee indicated as being enclosed, is being deposited with the United States Postal Service as First Class Mail, postage prepaid, and addressed to the Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on May 5, 2003.

Date: 5 MAY 2003


Mark A. Garzia